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Gas & Electric Utilities Plan

an element of the
Public Services
& Facilities Plan

SOLANO COUNTY

CALIFORNIA

HAHN, WISE and
ASSOCIATES, INC.
1558 Laurel Street • San Carlos, California
PLANNING CONSULTANTS

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GAS AND ELECTRIC UTILITIES PLAN

SOLANO COUNTY
California

December - 1966

Hahn, Wise and Associates - Planning Consultants - San Carlos, California

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OBJECTIVES OF THE PLAN

1. To develop long range plan for development of electric transmission lines and related facilities.

2. To develop a long range program for development of gas transmission lines and related facilities.

3. To project the demand for electric power and gas to the Year 1977 and to subsequently project such demand to the Year 1990, based on the Land Use Plans of the County and a projected population of 440,000 persons geographically divided as follows:

Southern Solano County	190,000
Central Solano County	100,000
Southeastern Solano County	54,000
Dixon Area	50,000
Vacaville Area	50,000

4. To establish firm support for underground construction of new electric distribution facilities.

5. To develop programs in cooperation with the utilities for replacing overhead distribution facilities with underground facilities in congested urban areas and along heavily travelled thoroughfares in cities.

6. To encourage continued technical studies on undergrounding of transmission lines and cooperation with local districts and other agencies in carrying out and financing such programs where economically and technically feasible.

7. To recommend landscaping treatment and beautification of substations, switching stations and gas regulator stations in harmony with surrounding development.

8. To recommend multiple use of transmission line easements, where practicable.

9. To establish use of or paralleling of existing rights-of-ways as a prime consideration. Serious consideration shall also be given to avoiding scenic areas.

DEFINITIONS OF TERMS USED IN THIS REPORT

Steam-Electric Generating Plant

An electric generating station where steam produced by using fossil or nuclear fuels, or obtained from geothermal sources, is used to drive the generating units.

Electric Transmission Substation

An assembly of equipment which is part of a power system for transmitting electric energy where (1) the energy is received at high voltage from one or more high voltage lines, and (2) by means of transformers the high voltage is reduced to a lower transmission voltage for further transmission to large individual customers, to interchange connections with other systems, to another transmission substation, or to distribution substations.

Electric Transmission Line

A line designed to carry large blocks of electric energy at a voltage of 50 kv or above from generating stations, between points of interchange, between transmission substations, to distribution substations or to large individual customers.

Electric Distribution Substation

An assembly of equipment which is part of a power system for distributing electric energy where energy at high voltage is received normally from a transmission line and is transformed to a lower voltage for distribution in the surrounding area.

Electric Distribution Line

A line with a primary voltage below 50 kv emanating from an electric distribution substation for the purpose of distributing electric energy in the area around the substation, or a line with a secondary voltage below 500 volts for general customer use.

Gas Regulating Station

An assembly of equipment installed for the purpose of automatically reducing and regulating the pressure in the downstream pipeline or main to which it is connected.

Gas Mixer Station

An assembly of equipment installed to mix supplies of gas from different sources for the purpose of controlling heating values.

Gas Transmission Line

A pipe installed for the purpose of transmitting gas from a source or sources of supply to one or more distribution centers or to one or more large volume customers or to interconnect sources of supply. In typical cases transmission lines differ from distribution mains in that they operate at higher pressures, they are longer, and the distance between connections is greater.

Gas Distribution Trunk Main

A pipe installed to convey gas from a transmission line to or between one or more distribution mains. It may operate at or above distribution main pressure.

Gas Distribution Main

A pipe installed in a community to convey gas to individual services or other mains.

Gas Service

The pipe that runs between a main or pipeline and the customers meter.

INTRODUCTION

Solano County was one of the 27 original counties of the State and was created in February 18, 1850. Mare Island Navy Yard, which was originally in Sonoma County, was later transferred to Solano County but there has been no boundary change since 1857.

The county was named after Chief Solano at the urging of General Vallejo.

The total area of the county is 901 square miles, 827 square miles land, of which about 98% is privately owned. Approximately 477,975 acres is in farm land, of which over 160,000 acres is in the classification of cropland, harvested and approximately 109,000 acres irrigated land.

Population of Solano County was 134,597 according to the 1960 Census and was estimated by the Department of Finance to be 164,800 in July 1966.

A very important aspect of a community's development, whether it be a single city, a group of cities or the entire county, is to provide adequate public services and facilities. The economic life of a community is directly influenced by the quality of public services provided. This portion of the county's Public Services and Facilities Element of the General Plan is concerned with the requirements of power and gas facilities to serve the anticipated future uses of land and projected population.

ELECTRIC UTILITIES PLAN

SOLANO COUNTY
CALIFORNIA

Scale 0 1 2 4 5 6 in Miles
HAHN WISE & ASSOCIATES PLANNING CONSULTANTS

LEGEND

Existing Transmission Lines
- 60KV & 115KV
- 230KV

Proposed Transmission Lines
- 60KV & 115KV
- 230KV
- 500KV

Right Of Way Acquired
- Vacant

Projections 1967 TO 1977
(For Transmission Lines)
1967 TO 1973
(For Substations)

Future	Existing	
▲	▲	Major Substation
■	■	Substation
○	●	Pumping Plant
■	■	Power Plant

YOLO COUNTY
Winters Substation
Route Approved by Solano County
U.S.B.R. 230 KV Lines
Route Approved by Solano County
Route Approved by Solano County
DIXON
Dixon Substation
Vaca-Dixon Substation
Maine Prarie Substation (Single Customer)
Batavia Substation (Single Customer)
Vacaville Substation
CALIF. MEDICAL FACILITY
NAPA COUNTY
Future Substation
Future Substation
Cache Slough Substation Single Customer
YOLO COUNTY
FAIRFIELD
TRAVIS AIR FORCE BASE
Travis Substation (Single Customer)
Suisun Substation
SUISUN
Calhoun Pumping Plant
Cordelia Pumping Plant
Cordelia Substation
Route Approved by Solano County For The West 500KV T/Ls
Route Approved by Solano County
RYER ISLAND
Probable Future Skaggs Island Substation
NAPA COUNTY
SONOMA COUNTY
SAN PABLO BAY
MARE ISLAND
Probable Future Carquinez Substation
Substation Site & Line Route Approved by City of Vallejo
VALLEJO
BENICIA
North Tower Substation
Future Substation
MARIN COUNTY
CONTRA COSTA COUNTY
SUISUN BAY
GRIZZLY ISLAND
BIRDS LANDING
RIO VISTA
SACRAMENTO COUNTY
Proposed Montezuma Power Plant
Route Approved by Solano County For The 3 Southerly 500KV & 2-230 KV T/Ls

The study area of this report includes all of Solano County and pays particular attention to the planning areas set out under the Area Planning Studies, including South Solano County, Central Solano County, Dixon, Southeastern Solano County and the Vacaville area.

The adequacy and quality of the electric power and gas supply is of prime importance to the utilities serving the planning areas and the county and to the county in meeting the anticipated growth within the county.

THE FUTURE OF SOLANO COUNTY

The South Solano County Planning Area

South Solano County, including the cities of Vallejo and Benicia, is expected to grow from a population of 75,000 in 1960 to 172,000 by 1985. It is expected that this growth will result primarily from the growth and expansion of the San Francisco Bay Area. The preliminary plan developed by the consultant for this area shows an area of urban development surrounding Benicia and Vallejo which is sufficient to accommodate the anticipated population at normal urban densities. The Plan proposes that public policy should encourage orderly outward development surrounding the two existing cities and discourage scattered and isolated development which would result in costly over-extension of public services and facilities.

The General Plan anticipates that South Solano County will become one of the regional

cultural and economic centers of the Bay Area Metropolitan Complex and that Vallejo will be a regional commercial center of the North Bay Counties.

A major new employment center of regional importance is being created in the industrial development at the former Benicia Arsenal. Mare Island is expected to remain a major employment center. These basic employment areas are served by a good freeway system linking South Solano County to the rest of the bay region.

The South Solano County Planning area has a total area of approximately 72,800 acres of which approximately 44,650 acres are land. Topographically, the region consists of a large rolling coastal plain along the westerly margin, and a narrower plain along the southern and easterly borders, with variation in elevations of less than 100 feet. The interior is occupied by hills with an elevation up to 1000 feet, with the wide valleys, large marsh and tide land areas located in the eastern and northwestern corners of the region. Most development is concentrated in Vallejo and the Benicia area.

In the South Solano County Planning area there are three political jurisdictions - Vallejo, Benicia and the County. The two cities occupy approximately 33% of the area. The General Plan Studies indicate that only 6-1/2% of the region is in residential use; .9 in commercial use; .3 in industrial use and 1.6 in recreation use. Five percent of the area is devoted to military use, with large areas being held at Mare Island. Approximately 63% of the total land area is unused.

The largest urban development in South Solano County is in the City of Vallejo, with a land area of approximately 10,000 acres and a population of 62,500. Forty-three hundred acres of land are zoned for residential use in Vallejo, of which 50% is developed. Less than 1% of Vallejo's total land area is occupied by industrial uses. Approximately 30% of industrial-zoned land is used for other purposes. There are about 500 acres devoted to recreational uses.

The City of Benicia is the second city in the South Solano County area. It has a population of 6500 persons and a land area of approximately 4500 acres. Approximately one-half of the city is undeveloped, The former Benicia Arsenal occupied an area of 1600 acres. Over one thousand acres of land are used for grazing purposes. There are approximately 1200 acres of land zoned for residential use, of which 25% is actually used for such purposes. There are around 140 acres of commercially-zoned land of which approximately 9% is used for commercial purposes. The city has only 12 acres of industrial use out of approximately 118 acres zoned for industrial uses.

The unincorporated area in the South Solano County Planning area consists of approximately 30,100 acres or 67% of the total area. The population of this region is approximately 8700, most of which is located around the perimeter of Vallejo. Within the area there are approximately 260 acres of residential use, nearly all of which is large lot, single family development. Industrial and commercial developments are small and are located immediately adjacent to the northwest boundary of Vallejo.

TABLE I.

SUMMARY OF VITAL LAND USE STATISTICS FOR SOUTH SOLANO COUNTY

	VALLEJO		BENICIA		UNINCORPORATED AREA (Solano County)		S S C	
	L.U. Acs.	% of S.S.C.	L.U.Acs.	% of S.S.C.	L.U.Acs.	% of S.S.C.	L.U.Acs.	% of S.S.C.
Total Area	15,400		5,400		52,000		72,800	
Total Land Area	10,050	22.56	4,500	10.10	39,100	67.34	44,650	
LAND USE	Acres	% of* Vljo	Acres	% of* Benicia	Acres	% of* Solano Co.	Acres	% of S.S.C.
Residential	2,300	22.89	305	6.78	263	0.88	2,868	6.43
Commercial	310	3.08	17	0.38	86	0.28	413	0.93
Mfg.	70	0.79	1,612	35.82	60	0.20	142	0.32
Parks & Rec.	510	5.79	348	7.73	185	0.62	707	1.59
Military	2,430	24.19					4,030	9.05
Streets	1,500	15.02	307	6.82	660	2.20	2,467	5.54
ZONING	Acres	% of* Vljo	Acres	% of* Benicia	Acres	% of* Solano Co.	Acres	% of S.S.C.
Residential	4,300	42.79	1,190	26.44	3,203	10.64	8,693	19.47
Commercial	718	7.14	137	3.04	30	.17	905	2.03
Industrial	405	4.03	118	2.62	1,064	3.47	1,587	3.55
Unclass.	2,623	26.10	2,140	47.55	9,550	31.45	14,313	32.06
Agricultural					15,380	51.00	19,380	34.45
Residential	4,300		1,190		3,203		8,693	
Res. Use	2,155	50.12	296	24.87	225	7.02	2,676	30.78
Other Use	1,170	27.23	565	47.49	101	3.16	1,641	18.88
Vacant	975	22.65	329	27.64	2,877	89.82	4,376	50.34
Commercial	718		137		50		905	
Comm. Use	237	33.02	12	8.76	10	20.00	259	28.62
Other Use	144	20.05	20	14.59	22	44.00	460	50.83
Vacant	337	46.93	105	76.65	10	36.00	186	20.55
Manufacturing	405		118		1,064		1,587	
Mfg. Use	61	15.06	11	9.32	3	0.28	75	4.72
Other Use	120	29.63	13	11.02	58	5.46	191	12.03
Vacant	224	55.31	94	79.66	1,003	94.26	1,321	63.24

*All percentages based on land area (i.e. after subtracting water area from total study area)

TABLE II.

RESIDENTIAL DEVELOPMENT

	1960		1985			
Planning Area	Population	Persons per Dwelling Unit (DU)	Persons per DU	Estimated net residential acres	DU per net residential acre	Population
Central Vallejo	13,778	2.95	3.10	510	10	17,200
Hill	7,270	2.70	3.00	243	14	10,600
Vista	11,299	3.20	3.20	510	6	9,700
Tennessee	3,908	3.50	3.30	533	6	11,400
Georgia	11,856	3.18	3.20	842	6	16,400
Carquinez	2,590	3.10	3.00	161	15	7,350
South Vallejo	4,579	3.90	3.20	746	7	15,050
American Canyon	2,308	3.02	3.20	355	6	6,800
Olympic	960	3.20	3.20	407	6	7,800
Country Club	2,330	3.20	3.20	529	6	10,150
Northeast Quadrant	-	-	3.10	570	8	14,200
East Vallejo Hills	-	-	3.20	475	6	9,100
South Benicia	5,395	2.80	3.00	305	8	7,600
North Benicia	675	2.80	3.10	1610	6	28,900
						172,250

POPULATION PROJECTION

MAP OF

SOLANO COUNTY

CALIFORNIA

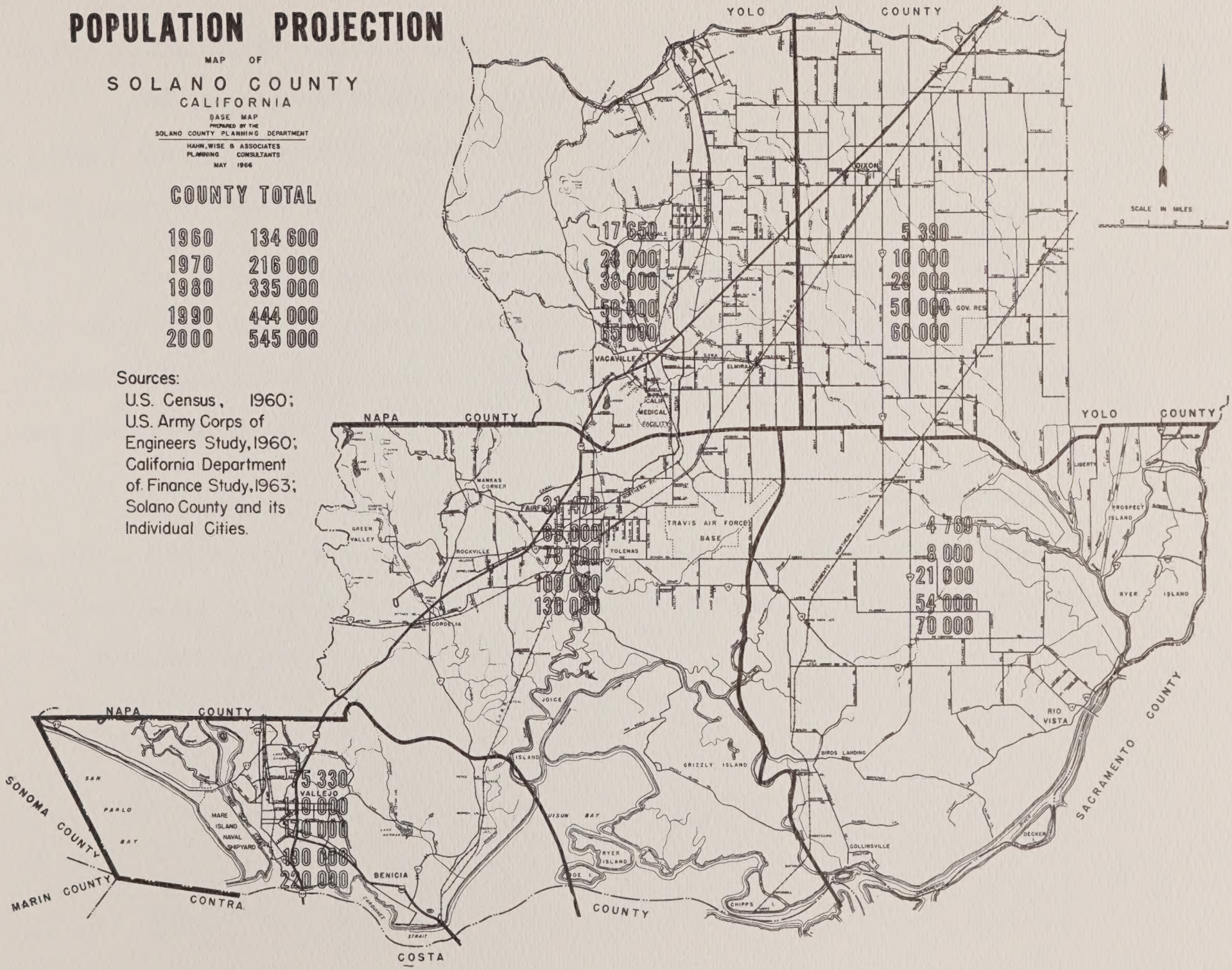
BASE MAP
PREPARED BY THE
SOLANO COUNTY PLANNING DEPARTMENT

HAHN, WISE & ASSOCIATES
PLANNING CONSULTANTS
MAY 1966

COUNTY TOTAL

1960	134 600
1970	216 000
1980	335 000
1990	444 000
2000	545 000

Sources:
U.S. Census, 1960;
U.S. Army Corps of Engineers Study, 1960;
California Department of Finance Study, 1963;
Solano County and its Individual Cities.



CENTRAL SOLANO COUNTY PLANNING AREA.

The Central Solano County Planning Area includes the Cities of Fairfield, Suisun City and a portion of the unincorporated area of the County. This area has a total of 370 square miles and includes Travis Air Force Base, which is now in the City of Fairfield.

The population of Fairfield was 14,968 according to the 1960 Census, and was estimated at 28,285 in 1965. Suisun City had a population of 2,470 in 1960 and 3,750 persons in 1965. Travis Air Force Base is estimated to have had a population of 16,271 in 1965, the balance of the population of an estimated 50,000 resides in the unincorporated area.

According to the projections of the Central Solano County Area General Plan, the population will increase from the present 50,000 to 130,000 persons by 1985. This projection assumes protection for the best agricultural lands from urban development and only a modest increase of personnel at the Travis Air Force Base.

TABLE III. DOMINANT LAND USE, 1965
CENTRAL SOLANO COUNTY PLANNING AREA

Land Use Type	Fairfield Net Acreage	Fairfield % of subtotal	Suisun Net Acreage	Suisun % of subtotal	Uninc. Net Acreage	Uninc. % of subtotal	Total Area (Tenths dropped) Net Acreage	Total Area (Tenths dropped) % of subtotal
Residential	1,130.3	63.0	50	38.8	383.	72.9	1,156	63.9
Duplex	19.4	1.1	25	19.4	14	2.7	58	2.4
Multi-family	66.8	3.7	15	11.6	---	---	82	3.3
Trailer Parks	56.4	3.1	2.8	2.2	---	---	59	2.4
Commercial	118.0	6.6	9.3	7.2	4	.8	131	5.4
Industrial	20.7	1.2	12.5	9.7	6	1.1	40	1.6
Church	39.0	2.2	---	---	---	---	39	1.6
Medical	13.5	.8	---	---	---	---	14	.6
Government	38.2	2.1	1.0	.7	---	---	39	1.6
Elementary Sch.	103.9	5.8	13.4	10.4	8	1.5	125	5.1
High Schools	77.5	4.3	---	---	---	---	78	3.2
Parks & Rec. uses	109.3	6.1	---	---	110	21.0	219	8.9
Subtotal	1,793.0	100.0	129.0	100.0	525	100.0	2,447	100.0
Agri., Vacant, Waterways, rds., Rail rds., etc.	707		371		149,475*		150,553	
	2,500		500		150,000		153,000	

Note: Acreages are based on measurements taken from land use maps of the County of Solano and the Cities of Fairfield and Suisun. The figures are approximations from map scales and are rounded off. The figures for Suisun and for the unincorporated area are not necessarily complete in all categories as the source maps had already summarized data. Acreages less than 1.0 have been dropped. The total acreage for the City of Fairfield does not include recent annexations.

*Includes Travis Air Force Base

Source: Consultant's compilation, 1965.

TABLE IV.

* ESTIMATED FUTURE DEMAND FOR RESIDENTIAL DEVELOPMENT
CENTRAL SOLANO COUNTY PLANNING AREA

(1) Population

Area	1965 Pop.	1965 %	1970 Pop.	1970 %	1975 Pop.	1975 %	1980 Pop.	1980 %	1985 Pop.	1985 %
Fairfield-Suisun	32,035	61.0%	43,000	67.4%	55,200	69.0%	71,000	71.0%	95,400	73.4%
Cordelia-Green Valley	1,700	3.4	3,200	4.9	4,800	6.0	7,000	7.0	10,600	8.2
Travis AFB	16,271	32.4	18,000	27.7	20,000	25.0	22,000	22.0	24,000	18.4
Total	50,006		65,000		80,000		100,000		130,000	100.0%

(2) New Population over 1965 (tables are cumulative)

Area	1970 Population	1975 Population	1980 Population	1985 Population
Fairfield-Suisun	11,800	23,200	39,000	63,400
Cordelia-Green Valley	1,500	3,100	5,300	8,900
Travis AFB	1,700	3,700	5,700	7,700
Total	15,000	30,000	50,000	80,000

* Data from General Plan Report

TABLE IV. Continued

(3) New Dwelling Units to be built after 1965 (tables are cumulative)

Area		1970 D.U.	1975 D.U.	1980 D.U.	1985 D.U.
Fairfield-Suisun	(3.45 per D.U.)	3,420	6,725	11,304	18,377
Cordella-Green Valley	(3.45 per D.U.)	435	899	1,536	2,580
Travis AFB	(4.0 per D.U.)	425	925	1,425	1,925
Total		4,270	8,549	14,265	22,882

Notes: Military and civilian populations are not distinguished and are mixed in each of the three areas. The resident population of Travis depends on future U.S. government policy. The amount under or over these estimates for the most part will be added or subtracted from Fairfield-Suisun.

TABLE V.

ESTIMATED FUTURE DEMAND FOR RESIDENTIAL LAND
CENTRAL SOLANO COUNTY PLANNING AREA
(EXCLUDING DWELLING UNITS ON TRAVIS AFB)

All totals are cumulative

	1970	1975	1980	1985
Total population (Exclude residents of Travis AFB)	47,000	60,000	78,000	106,000
New population (Above 1965 figure)	11,800	26,300	44,300	72,300
Total number of additional dwelling units required	3,855	7,624	12,840	20,956
Percentage new single family d.u.'s	57	56	55	54
Percentage new duplex, triplex, fourplex d.u.'s	21	21	21	21
Percentage multifamily d.u.'s	21	23	24	25
**Additional land area for single family (Average of 2 families per gross acre)	1,100	2,140	3,530	5,720
Additional land area for duplex to fourplex at 8 d.u.'s per gross acre	100	200	340	550
Additional land area for multifamily at 16 d.u.'s per gross acre	50	110	190	330
Total additional gross acres required for residential use	1,250	2,450	4,060	6,600
***Reserve				900
Total available acreage for residential use				7,500

* (a) These figures do not include the replacement of old homes during the next twenty years.
(b) Based on 3.45 persons per dwelling unit
** Gross acreage is approximately twice net acreage
***Period of major construction to go beyond 1985.

RIO VISTA AND SOUTHEASTERN SOLANO COUNTY PLANNING AREA.

The Rio Vista Planning Area is that area bounded by the northerly line of Rio Vista Township and the boundaries of Solano, Contra Costa and Sacramento Counties on the south and east, and a line parallel to, and 2 miles west of Mt. Diablo Rim to the west. The area has a total of 278 square miles, or nearly one-third of the area of Solano County.

The Rio Vista Planning Area consists of flat and rolling lands which lie in the alluvial plain of the Sacramento River, as it slopes eastward from the coast ranges. Flat lands make up 72% of the land within the Planning Area, with some low marsh land in the Suisun Bay Area included within the boundaries. The remainder of the area consists of a large area of low rolling hills with maximum elevations of 250 feet. These lie in the southeastern part of the area. About 6% of the area consists of waterway channels and the Sacramento River and its tributaries.

The City of Rio Vista is the only community of any size which has developed in this area. The Planning Area has grown from a population of 4760 in 1960, to approximately 4800 in 1966. The City of Rio Vista, which had a population of 2616 persons in 1960 presently has an estimated population of 3250 persons. It is expected that the Planning Area should reach a total population of approximately 21,000 persons by 1980.

The predominant part of the area is in agriculture - 258 square miles; waterways - 16 square miles; the developed area includes .31 of a square mile or 201 acres of residential development, approximately 100 acres of industrial area. The proposed General Plan, developed by the area's planning consultants, had recommended that 80% of the land in the Planning Area remain in agricultural use, and that urban residential development be approved only adjacent to existing developed areas. Commercial development would fall largely within the present City of Rio Vista, with industrial potential recommended to be on either side of the Sacramento-Northern Railroad. Lands northeast and adjacent to Rio Vista for intensive industrial development would also be served by river frontage for water transportation as well as a rail spur line.

TABLE VI.

EXISTING LAND USE

The land use research shows that the City of Rio Vista, 447 acres, only occupies about one percent of the Planning Area. Industrial development as a whole only takes up about 60 acres.

Total land devoted to urban uses in the Planning Area is only five percent of the land in the area. The primary use, about 90%, of the land is in grain and truck garden agriculture shown on the Existing Land Use map of the Planning Area.

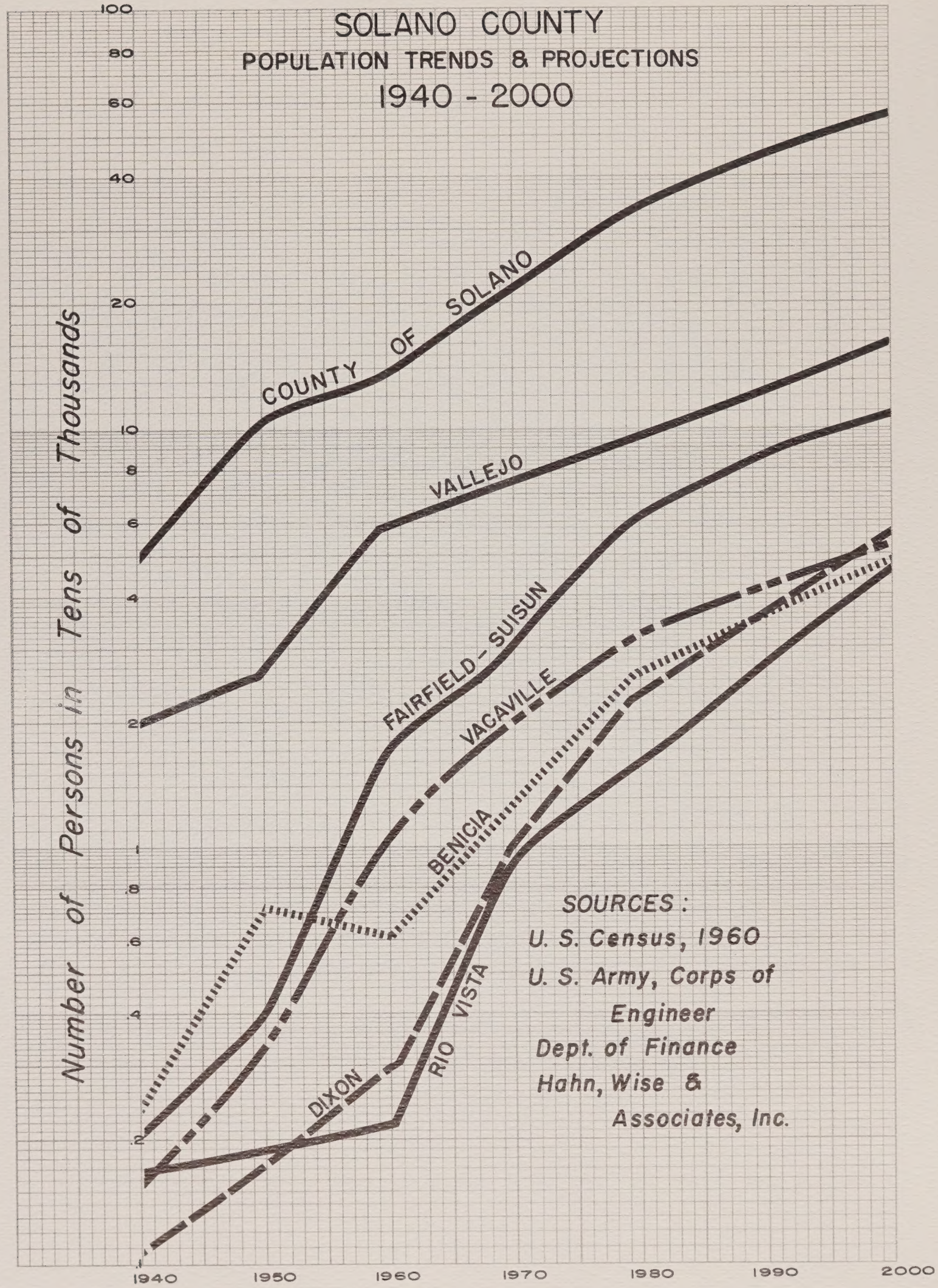
EXISTING LAND USE RIO VISTA PLANNING AREA
JUNE 1956

Use	Acres	Sq. Miles	Percent of Planning Area
Residential	200.92	0.31	0.13
Rio Vista	97.92		
Rural	103.00		
Commercial	17.76	0.03	0.01
Rio Vista	17.43		
Rural	0.33		
Industrial	60.41	0.09	0.04
Rio Vista	20.09		
Rural	27.91		
Rio Vista Sewer Plant	12.41		

TABLE VI. Continued

Use	Acres	Sq. Miles	Percent of Planning Area
Agricultural	165,357.01	258.37	90.55
Public and semi-public	31.61	0.05	0.01
Transportation	464.31	0.73	0.35
Rio Vista Airport	108.00		
Railroads	356.31		
Streets & Highways	1,268.98	1.98	0.69
Rio Vista	182.43		
Rural	1,086.55		
Rivers & Sloughs	10,304.00	16.10	5.65
Total	177,705.00	277.00	100.00%

*Not including gas well leases


SOLANO COUNTY
POPULATION TRENDS & PROJECTIONS
1940 - 2000
Number of Persons in Tens of Thousands
100
80
60
40
20
10
8
6
4
2
1
.8
.6
.4
.2
COUNTY OF SOLANO
VALLEJO
FAIRFIELD-SUISUN
VACAVILLE
BENICIA
RIO VISTA
DIXON
1940
1950
1960
1970
1980
1990
2000
SOURCES :
U. S. Census, 1960
U. S. Army, Corps of Engineer
Dept. of Finance
Hahn, Wise & Associates, Inc.

MAP OF

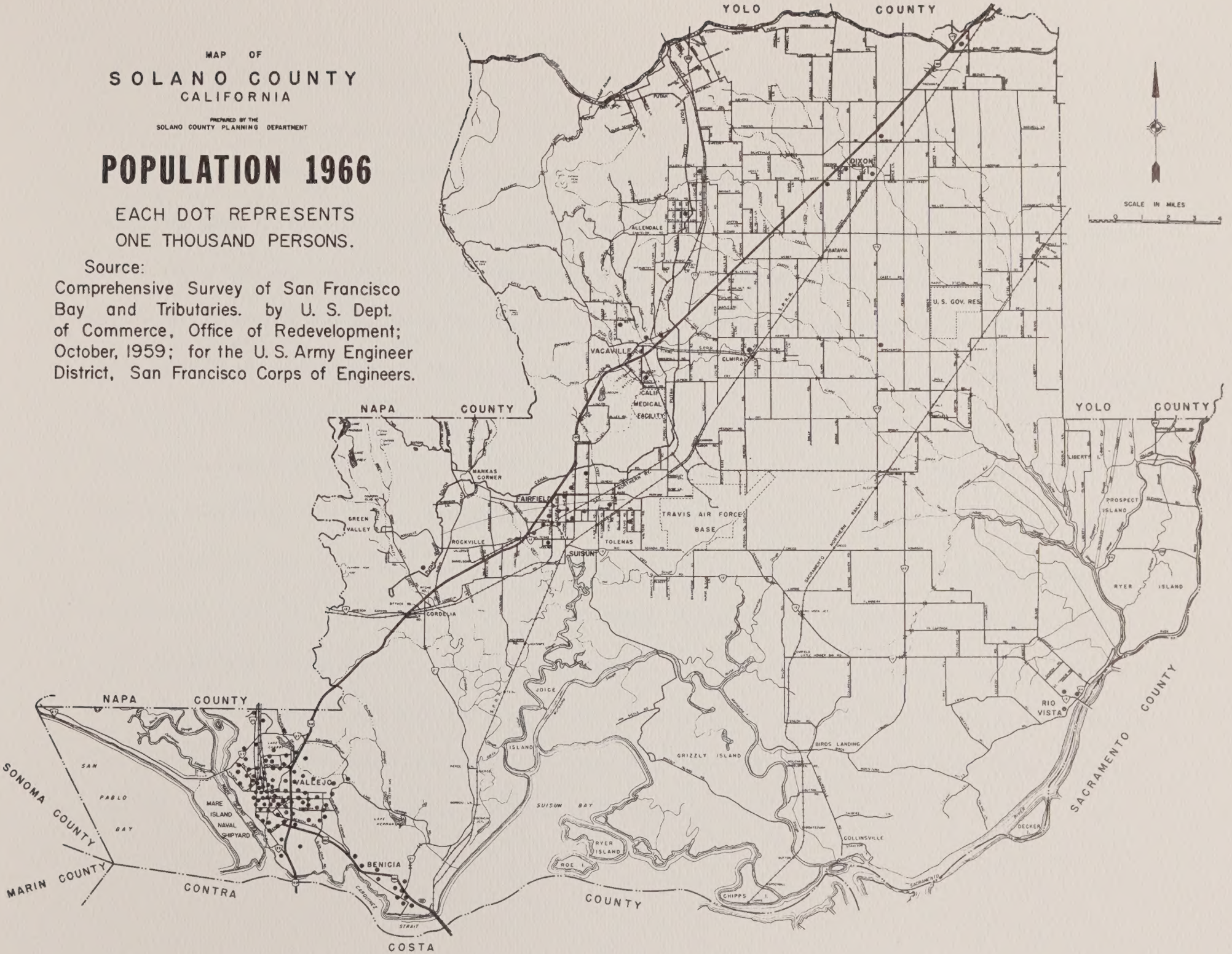
SOLANO COUNTY
CALIFORNIA

PREPARED BY THE
SOLANO COUNTY PLANNING DEPARTMENT

POPULATION 1966

EACH DOT REPRESENTS
ONE THOUSAND PERSONS.

Source:
Comprehensive Survey of San Francisco Bay and Tributaries. by U. S. Dept. of Commerce, Office of Redevelopment; October, 1959; for the U. S. Army Engineer District, San Francisco Corps of Engineers.



THE DIXON AREA GENERAL PLAN.

Dixon is an agricultural community located 20 miles southwest of Sacramento. The Dixon Planning Area extends three miles west of the city, nine miles south to the Township line and north and east to the Yolo County Line. The City of Dixon is a compact community containing nearly all of the urban population of the Planning Area within its 720 acre incorporated area. Dixon is bisected by the Main Line of the Southern Pacific Railroad Track. Outside of the agricultural industry there is very little basic employment in the area, other than the important farm service center that Dixon has become, with retail sales estimated at seven million dollars during the year 1965. The Dixon Census Division indicated a population of 5,388 in 1960 and the City of Dixon 2,970. The area General Plan predicts that Dixon and the urban area will reach a population of 15,000 and the rural area 6,000 by 1980. The land use in the Dixon Planning Area presently is divided into the following categories: Residential - 156 net acres; commercial, 19 net acres; industrial, 46 net acres and public facilities such as parks and schools and streets, 212 acres; railroad and utilities, 16 acres; vacant and open, 108 acres - or a total of approximately 559 acres. The proposed land use, for the Dixon Area, would be: 967 gross acres for residential use, 120 acres for commercial use, 4980 acres for industrial use and 426 acres for public facilities, or a total of 6493 acres.

TABLE VII.

EXISTING AND PROPOSED LAND USE
DIXON

EXISTING URBAN LAND USE, 1958

	NET ACRES	
RESIDENTIAL	156.3	
Single Family		150.3
Multi-Family		5.4
Trailer Park		0.2
Labor Quarters		0.1
COMMERCIAL	19.3	
Retail Shopping		3.2
Office, Bank		2.3
Gasoline Station		2.7
Commercial Service		11.1
INDUSTRIAL	46.1	
Light Industry		3.4
Heavy Industry		42.7
PUBLIC FACILITIES	211.8	
Recreation Park		12.5
School		37.6
Other		50.3
Streets		68.8
Vacant		41.6
SEMI-PUBLIC	1.9	1.9
RAILROAD AND UTILITY	16.2	16.2
VACANT OR OPEN (Privately Owned)	108.4	108.4
TOTAL	559.7	559.7

Total includes 58.0 acres outside city limits.
Street acreage is for city only.

PROPOSED URBAN LAND USE
DIXON AREA GENERAL PLAN

	GROSS ACRES (Including Streets)	
RESIDENTIAL	1,400	
Low Density		1,319
High Density		81
COMMERCIAL	135	
Retail Shopping		40
Commercial Service		55
Highway Commercial		40
INDUSTRIAL	4,980	
Limited Industry		150
Limited Industrial Reserve		625
General Industry		105
General Industrial Reserve		4,100
PUBLIC FACILITIES	441	
Recreation Park		95
Golf Course		160
School		120
Fairgrounds		40
Cemetery		26
TOTAL	6,956	6,956

Total does not include the 8,000 acre general industrial reserve area south of Bunker Station Road.

VACAVILLE AREA, GENERAL PLAN.

Vacaville is located on U. S. Highway 40, twenty-five miles from Vallejo, situated at a point at the south end of Vaca Valley and opens into the central valley of California, at an elevation of 180 feet. The English Hills separate the Vaca Valley from the central valley on the east. Beyond the low range of hills to the west is Lagoon Valley; further west, the Vaca Mountains rise to an elevation of 2810 feet. The Planning Area measures 14 miles from north to south, and 12 miles from east to west. Vacaville and Elmira (a community of 250 persons) are the only urban settlements in the Planning Area.

The Vacaville Census Division indicated a population of 17,648 persons in 1960, and 10,898 persons for the City of Vacaville. The consultant who prepared the General Plan for the Vacaville Area has made a projection of an urban population in the Planning Area of approximately 40,000 persons by 1990. He has proposed outer neighborhoods capable of housing a total of 16,500 persons; inner neighborhoods, large enough to accommodate a population of 23,500 persons. The inner neighborhood is expected to be an expansion of the existing core north of U.S. Highway 40. The Plan proposed 38 acres for commercial development in the central business district and five centers of 6 acres each for neighborhood shopping. Industrial areas have been set aside for approximately double the indicated need of the area, or 1300 acres.

EXISTING ZONING (Generalized)

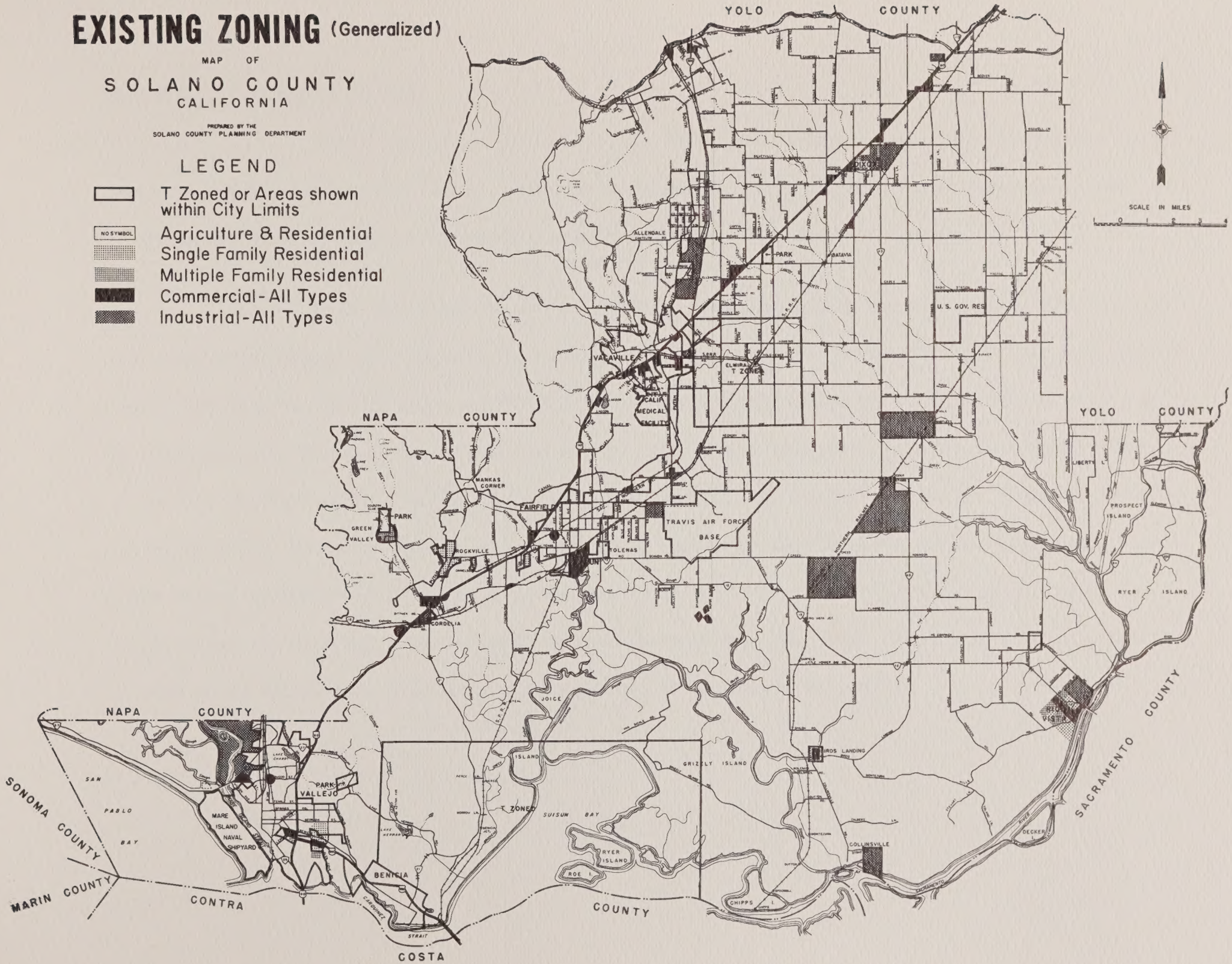
MAP OF

SOLANO COUNTY
CALIFORNIA

PREPARED BY THE
SOLANO COUNTY PLANNING DEPARTMENT

LEGEND

- T Zoned or Areas shown within City Limits
- NO SYMBOL — Agriculture & Residential
- Single Family Residential
- Multiple Family Residential
- Commercial - All Types
- Industrial - All Types



THE ROLE OF PUBLIC UTILITIES

Each community's plans for future development, growth and prosperity are greatly dependent upon the community's ability to provide adequate services and facilities at reasonable cost. Inadequate facilities or abnormal costs will retard community growth and the economy.

It is recognized that water, sewers, drainage, electricity and gas are basic requirements for development. This report covers two of these basic requirements: electricity and gas. The entire county is served by the same utility (Pacific Gas and Electric Company) in both of these facilities. Only existing and proposed major facilities will be discussed in this report. Distribution System Planning, to provide adequate service for the future is the responsibility of the utility company. The utility and the future developer determine the kind of services to be installed under the plan, provided that such systems come within the framework of stated county and community policy as to the kind (not adequacy) of distribution service required. Whether such services be overhead, rear line, streamlined or underground is a local policy decision as long as such decision can be considered reasonable.

ELECTRICAL FACILITIES

A. General

A single electrical system supplies electrical energy directly to all residents of the county. The Pacific Gas and Electric Company owns and operates the electrical system. Future planning for its facilities is the responsibility of that utility within the framework of the Area Land Use Plan adopted and approved by the county.

B. Source of Power.

All electrical energy is presently generated outside Solano County. However, future plans include the construction of a steam-electric generating plant in the vicinity of Collinsville. The Resources Agency of the State of California has signed an agreement with the Pacific Gas and Electric Company which, among other things, provides for (1) protection of water quality, flood control works, aquatic life and recreational uses of the river waters; (2) development of recreation areas consistent with safety and plant operating requirements; and (3) construction to be esthetically compatible with the surrounding area.

The electrical energy for the County is presently supplied from 60, 115 and 230 kv lines serving the utility company's substations within the county, as indicated on the Electric Utilities Plan. Future plans include 500 kv lines as part of the major supply network.

C. Distribution Lines

The existing distribution system in the county and its communities is primarily overhead, supported on wood poles in city streets, county roads, rear lot lines, public utility easements and private rights-of-way.

Later trends have been toward either "streamlined" or underground construction in new developments.

The major utility companies of the West, firmly support underground construction of distribution facilities. The recent progress in technology, materials and installation methods for undergrounding electric lines in new residential subdivisions, and certain other new developments, provides means for giving underground electric service at a nominal additional cost.

However, since rates to residential communities and other developments are based on overhead service, the additional cost for underground distribution is normally borne by the developer.

This is an equitable policy as, in most instances, the increased property values and aesthetic values more than offset any additional cost for underground electric utilities.

The major Western utility companies have, for many years, had a policy of replacing over-head distribution lines with underground facilities in congested urban areas and along heavily traveled thoroughfares in cities. In such instances, where there are heavy operating loads, the conversion to underground is at the expense of the utility.

Pacific Gas and Electric Company has submitted a plan to the California Public Utilities Commission for approval, which would have the effect of speeding up the amount of conversion of overhead distribution facilities to underground by approximately four times the present rate.

In general, underground distribution now presents no great technical problems and usually additional costs are nominal. Underground transmission lines required to transmit large blocks of power are a somewhat different story. Economic problems are multiplied many times. The large cost differential cannot easily be paid by the people in most areas who would benefit. Because of some technological problems but primarily the economic factors, underground transmission lines presently can be justified only in metropolitan areas where building heights and street congestion make overhead construction impossible, and where the people in specific areas are able and willing to pay the cost differential.

THE PLAN (ELECTRICAL)

A. Purpose

1. To show location of existing major facilities as an aid to effective land use planning.

2. To set out as far ahead as practical the general location of future transmission facilities that may be needed to provide electrical energy for the people, commerce and industry of the county.

3. To suggest landscaping treatment of future substations and switching stations required to distribute electrical energy.

4. To suggest uniform regulations dealing with undergrounding electric distribution facilities in new developments.

B. Basis of Recommendations

Based on existing development, population centers, existing zoning and indicated future land uses shown on the Land Use Plan of the Planning Areas and electric load growth studies, a plan has been developed with the technical advice of Pacific Gas and Electric Company indicating transmission lines, substations and other facilities, existing and proposed, to supply electrical energy to the county.

The map entitled "Electric Utilities Plan", Page 30 of this report, shows:

1. Existing transmission lines.

2. Proposed transmission lines where location has been approved by Solano County.

3. Right-of-Way acquired, vacant.

GAS UTILITIES PLAN

SOLANO COUNTY
CALIFORNIA

Scale 0 1 2 4 5 6 in miles

HAHN, WISE & ASSOCIATES PLANNING CONSULTANTS

Base Map: Solano County Planning Dept.

LEGEND

- Existing Gas Transmission Lines
- Trunk Line to Distribution Areas
- Proposed Gas Transmission Lines
- Compressor Station
- Mixer Station

Projection--1967 to 1977

4. Future bulk transmission lines.

5. Existing and future substations.

6. Future generating plants.

The lines and substations projected reflect those requirements reasonably foreseen as of the date of the map. A new industrial load or major housing development could require lines or substation sites in addition to those shown.

C. Facility Locating Criteria

In selecting locations for proposed transmission line and substation sites the following items shall be considered:

1. General Plans of counties and cities through which the proposed lines may pass or within which a substation may be located.

2. Present and proposed land use developments.

3. Recommendations and comments of the local planning jurisdictions.

4. Esthetics.

5. Economics of design, construction and operating requirements.

6. Multiple use of proposed right-of-way by other utility installations.

In selecting locations, use of existing rights-of-way or paralleling such rights-of-way shall be a prime consideration consistent with the requirements of service reliability. In addition, consideration shall be given to avoiding heavily developed and scenic areas.

GAS FACILITIES

A. General

As in the supplying of electrical energy, a single system supplies natural gas to most residents of the county. Pacific Gas and Electric Company owns and operates the gas transmission and distribution system. Future planning of its facilities is the responsibility of that utility within the framework of the General Plans of the Planning Areas adopted by the county and the communities.

B. Source of Supply

The natural gas supply for the county originates in several main California fields, some of which are situated within the county, including Suisun Gas Field, Kirby Hills Field, Rio Vista Field, Lindsey Slough Field, Maine Praire Field, Millar Field, Bunker Field and Winters Field, all are situated in the easterly portion of the county.

The gas transmission lines serving the county are shown on the "Gas Utilities Plan" on Page 34.

C. Distribution Lines

The existing distribution system in the various communities is traditionally located in public rights-of-way. It is of utmost importance that such lines be constructed prior to installation of street improvements in all new developments and that such facilities be stubbed to the property line.

THE PLAN (GAS)

A. Purpose

1. To show location of existing major facilities as an aid to effective land use planning.

2. To set out as many years ahead as practical the general locations of future major transmission facilities that may be needed to provide gas service to the present and future population and physical development of the county.

B. Basis of Recommendations

Again a Plan has been developed with technical advice of Pacific Gas and Electric Company based on existing development, population centers, load growth studies, existing zoning and future populations and Plans. The Plan, at the end of this report, entitled "Gas Utilities Plan" indicates in general terms the routes or rights-of-way for major transmission lines and other facilities necessary to supply gas service to Solano County.

The map shows:

1. Existing major transmission lines and distribution trunk mains
2. Existing distribution trunk mains
3. Future transmission lines
4. Gas fields

Use of or paralleling existing rights-of-way is proposed for future lines where practical or feasible. While aesthetic considerations are not as great a problem as in the case of transmission of electrical energy, unnecessary scarring of hill areas and permanent denuding areas of vegetation should be avoided.

GAS UTILITIES PLAN

SOLANO COUNTY

CALIFORNIA

Scale 0 1 2 4 5 6 in miles

HAHN, WISE & ASSOCIATES PLANNING CONSULTANTS

Base Map: Solano County Planning Dept.

LEGEND

- Existing Gas Transmission Lines
- Trunk Line to Distribution Areas
- Proposed Gas Transmission Lines
- Compressor Station
- Mixer Station

Projection--1967 to 1977

BEAUTIFICATION

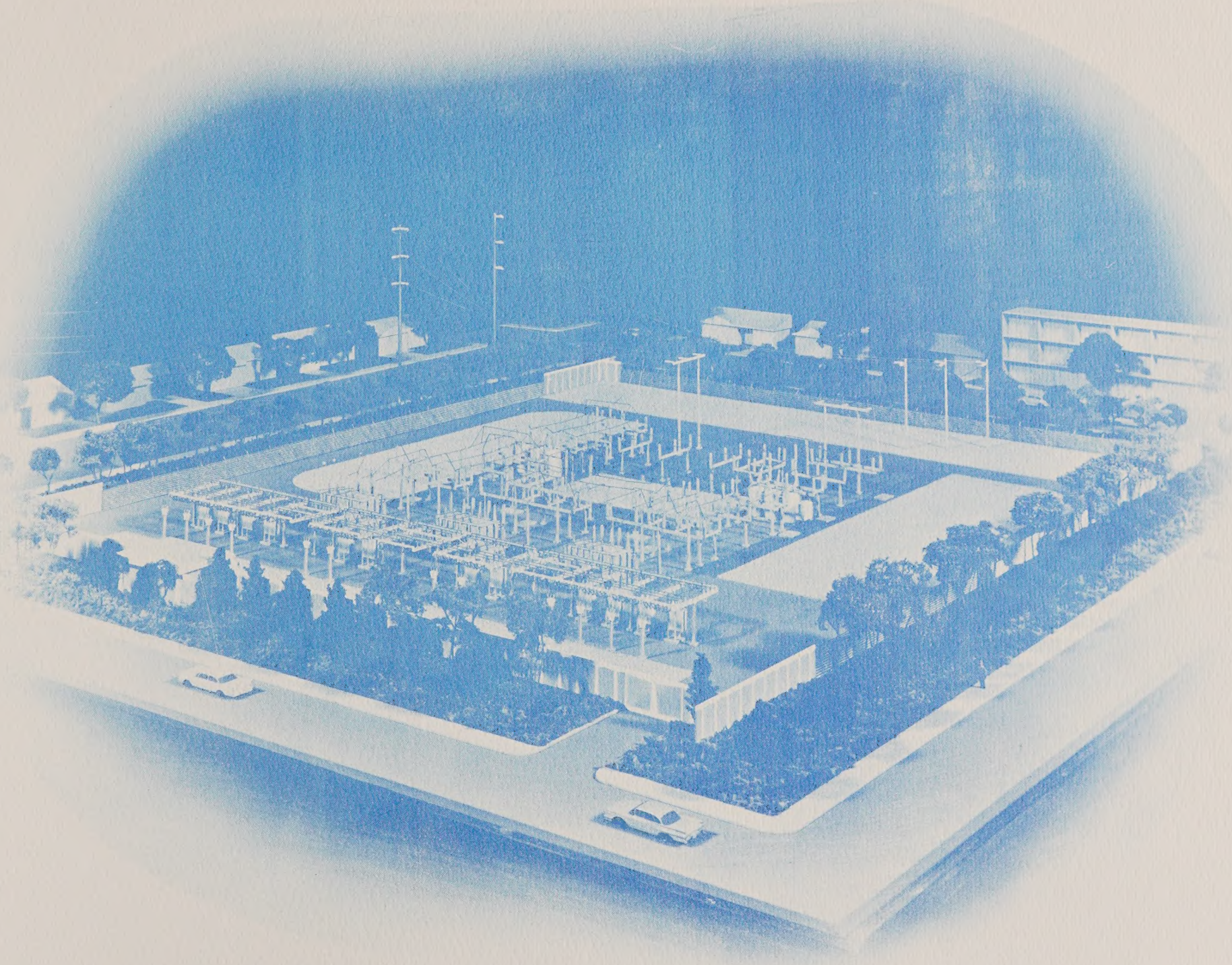
It is of paramount importance that serious consideration be given to careful treatment of the architecture and landscaping of substations, switching stations and gas regulator stations.

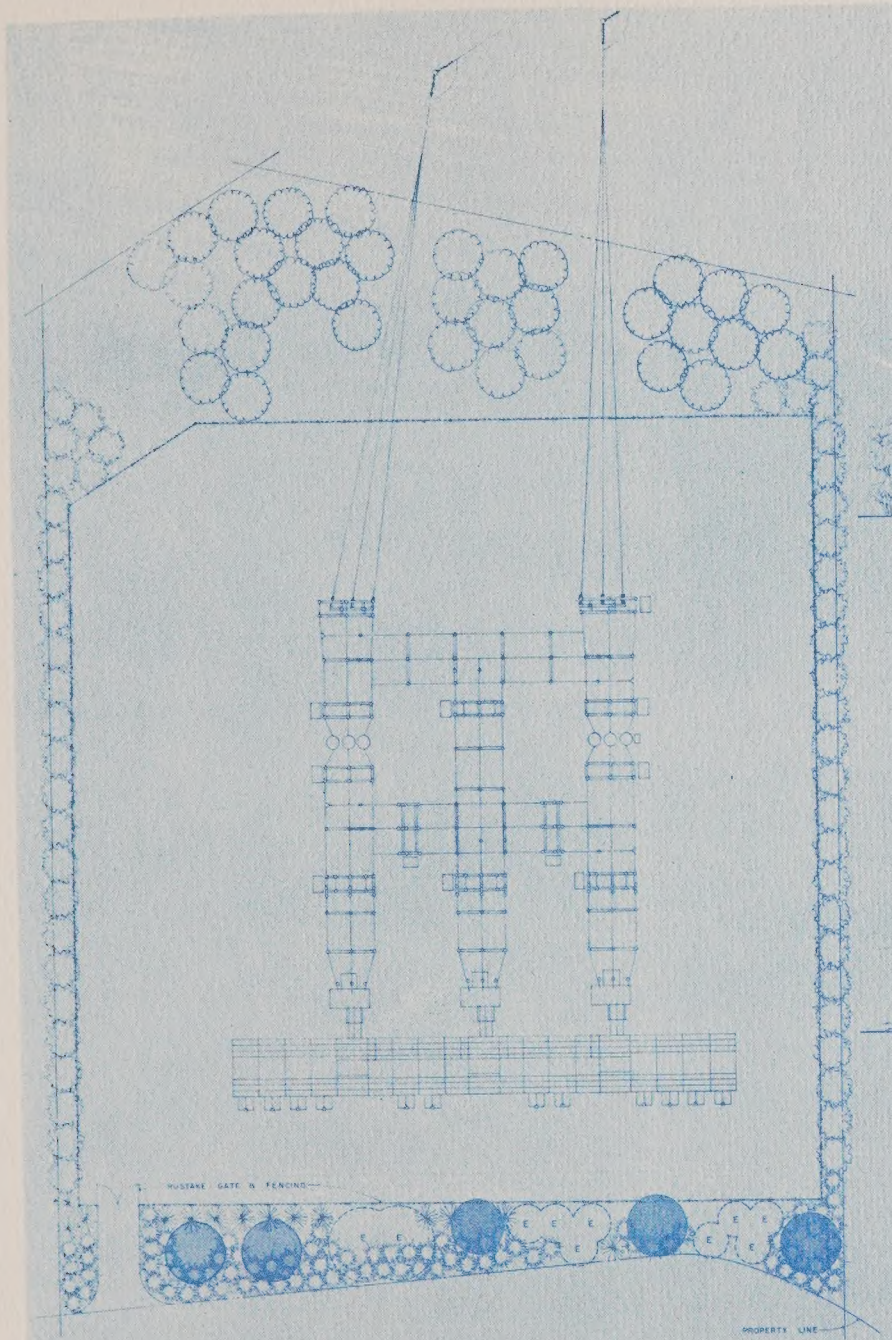
Suggested treatment of electric substations and gas regular stations is shown on the following pages.

The plans, as indicated, are only suggested treatment; there could be, of course, many variations which would be completely acceptable.

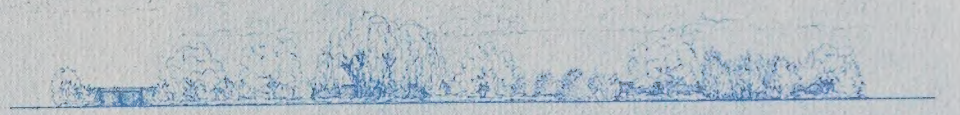
Multiple Use of Transmission Easements. An investigation should be made into the possibility of multiple use of transmission line easements, particularly in urbanized areas. It is recognized that the utility company, in most instances, does not own the right-of-way in fee, but there will be circumstances in or near cities or urban development where the utility, under certain circumstances, could give approval to the use of land for parks and recreation purposes. The uses would necessarily have to be restricted to recreation uses which would not create a hazard or be detrimental to utility operators. However, in or near communities, an attractive park area could be created, as well as golf courses, riding and hiking trails and greenbelts.

MODEL SUBSTATION



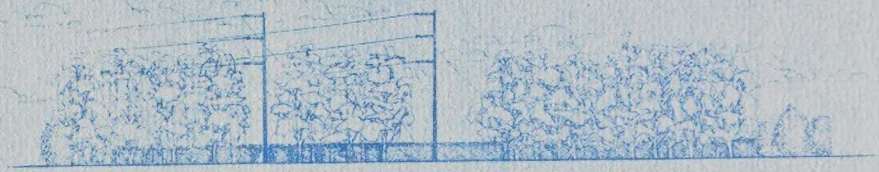


SUBSTATION PLAN



NORTH ELEVATION

EAST ELEVATION

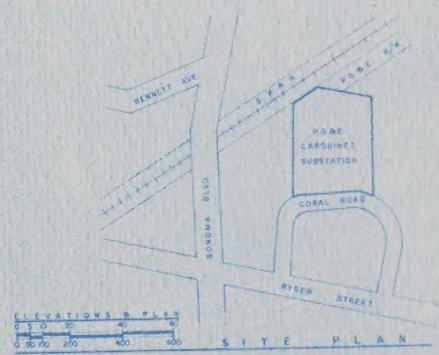


SOUTH ELEVATION

WEST ELEVATION

PLANT LIST

SYMBOL	NAME	HEIGHT	SPREAD	MIN. PLANT SIZE	REMARKS
(E E)	EXISTING				EXIST. TREES MARKED AS SHOWN TO REMAIN. ALL OTHERS TO BE REMOVED
●	EUCALYPTUS FICIFOLIA RED FLOWERING GUM	30'-50'	20'-40'	8'	EVERGREEN RED FLOWERS
○	EUCALYPTUS S. ROSEA RED IRON BARK	30'-40'	10'-15'	6'	EVERGREEN PINK FLOWERS
○	EUCALYPTUS G. COMPACTA DWARF BLUE GUM	20'-30'	15'	3'	EVERGREEN BLUE GREEN LEAVES
✳	CALISTEMON LANCEOLATUS LEMON BOTTLE BRUSH	10'-15'	8'-10'	4'	EVERGREEN RED BRUSH TYPE FLOWERS
○	JUNIPERUS C. PFITZERIANA PFITZER JUNIPER	4'-6'	10'	2'	EVERGREEN



SITE PLAN

PROPOSED LANDSCAPING FOR CARQUINEZ SUBSTATION

GAS REGULATOR STATION

MAKING THE PLAN WORK

The Gas and Electricity Utility Element of the Public Services and Facilities Plan should be studied by the county and city planning commissions, and every agency and department interested in the future of the county; this includes the legislative bodies, administrative staff and all cities.

The new proposals and possible modifications suggested should be presented at the public hearing before the planning commission of the county and the hearing before the Board of Supervisors.

The final plan as agreed upon should be adopted by resolution as the Gas and Electricity Utilities Element of the Public Services and Facilities Plan of the County. In this way the plan becomes the stated policy for future utility development and the necessary rights-of-way which will be required to carry out the development. It becomes the general guide for the future.

Once adopted, the plan should be reviewed every year to see if changes are indicated. Other Utilities should be encouraged to submit their suggestions and plans for future development and be added to the plan.

The plan will, of course, be implemented by the Utilities involved and the suggested locations, general as they are intended to be, may be subject to some change when actual engineering occurs; however, adequate justification for any substantial change should be the responsibility of the Utility.

APPENDIX

1. Suggested wording for requiring distribution lines to be placed underground in new developments.

2. Suggested wording for an Underground District Ordinance.

3. Suggested wording for an ordinance establishing regulations for removal of certain overhead facilities in designated districts.

All suggested ordinances are intended as models only and should be tailored to meet individual needs of the jurisdiction.

SUGGESTED AMENDMENT TO SUBDIVISION ORDINANCE
WHERE UNDERGROUND UTILITIES ARE DESIRED FOR DISTRIBUTION FACILITIES

All utility distribution facilities (including but not limited to electric, communication and cable television lines) installed in and for the purpose of supplying service to any residential (or commercial) subdivision shall be placed underground, except as follows:

1. Equipment appurtenant to underground facilities, such as surface mounted transformers, pedestal mounted terminal boxes and meter cabinets, and concealed ducts.

2. Metal poles supporting only high voltage wires, switches, transformers and street lights.

The subdivider is responsible for complying with the requirements of this Section, and shall make the necessary arrangements with the utility companies involved for the installation of said facilities. The Planning Commission may waive the requirements of this Section if topographical, soil, or any other conditions make underground installation of said facilities unreasonable or impractical.

(Industrial subdivisions are excluded from the provisions of this Section).

SUGGESTED UNDERGROUND DISTRICT ORDINANCE

SECTION 1. DEFINITIONS. Whenever in this ordinance the words or phrases hereinafter in this section defined are used, they shall have the respective meanings assigned to them in the following definitions:

(a) "City" ("County") shall mean the City (County) of _____, a municipal corporation of the State of California.

(b) "Commission" shall mean the Public Utilities Commission of the State of California.

(c) "Council" shall mean the City Council of City.
(c) "Board" shall mean the Board of Supervisors of the County.

(d) "Underground Utility District" or "District" shall mean that area in City more particularly described as follows:

Said area is shown on the map marked Exhibit "A" which is attached hereto and hereby made a part hereof.

(e) "Person" shall include individuals, firms, corporations, partnerships, and their agents and employees.

(f) "Poles and overhead wires and associated overhead structures" shall mean poles, towers, supports, wires, conductors, guys, stubs, platforms, crossarms, braces, transformers, insulators, cut-outs, switches, communication circuits, appliances, attachments, and appurtenances located aboveground, upon, along, across, or over the streets, alleys and ways of City (County), and used or useful in supplying electric, communication, or similar or associated service.

(g) The word "utility" shall include all persons or entities supplying electric, communication, or similar or associated service by means of electrical materials or devices.

SECTION 2. UNDERGROUND PROGRAM IN THE UNDERGROUND UTILITY DISTRICT. In order to provide for the orderly removal of existing poles and overhead wires and associated overhead structures within the Underground Utility District by the end of _____ months, it is the intention of the Council (Board), insofar as may be practicable, to adopt ordinances pursuant to Section 3 of this ordinance which will result in the removal of poles and wires and associated overhead structures:

(1) from approximately 50% of the area of the District by _____, 19___, and

(2) from 100% of the area of the District by _____, 19___.

It is also the intention of the Council, in fixing the areas from which poles and overhead wires and associated overhead structures are to be removed, to give due consideration to the costs to be incurred by the utilities in such removal and in the construction of replacing underground facilities to the end that such costs will be evenly distributed over said _____ months.

SECTION 3. PUBLIC HEARING RE. REMOVAL OF OVERHEAD WIRES. The Council (Board) may, from time to time, call public hearings to ascertain whether the public necessity, health or safety requires the removal of poles and overhead wires and associated overhead structures from any public street, alley, or way within the Underground Utility District, and the underground installation of wires and facilities for supplying electric, communication, or similar or associated service. The City Clerk of City (County Clerk of County) shall notify all affected property owners and utilities by mail of the time and place of such hearing at least thirty (30) days prior to the date thereof. If after such public hearing the Council (Board) finds that the public necessity, health or safety requires such removal and such underground installation, the Council (Board) shall by ordinance order such removal and underground construction. A description of the portion of the Underground Utility District from which said poles and overhead wires and associated overhead structures are to be removed shall be included in said ordinance.

The Council-(Board) shall, in each ordinance adopted pursuant to Section 3, fix the time within which such poles and overhead wires and associated overhead structures must be removed and within which affected property owners must be ready to receive underground service. The Council-(Board) shall allow a reasonable time for such removal, having due regard for the availability of necessary labor, materials and equipment for such removal and for the installation of such underground facilities as may be occasioned thereby.

SECTION 4. UNLAWFUL ACTS. Whenever the Council-(Board) orders the removal of poles and overhead wires and associated overhead structures as provided in Section 3 hereof, it shall be unlawful for any person or utility to erect, construct, place, keep, maintain, continue, employ or operate any pole, overhead wire or associated overhead structure in any public street, alley or way in the designated area after the date when said overhead facilities are required to be removed, except as said overhead facilities may be required to furnish service to an owner or occupant of property prior to the performance by such owner or occupant or the City-(County) Engineer of the underground work necessary for such owner or occupant to continue to receive utility service as provided in Sections 10 and 10.3 hereof, and for such reasonable time required to remove said facilities after said work has been performed, and except as otherwise provided in this ordinance.

SECTION 5. EXCEPTION, EMERGENCY OR UNUSUAL CIRCUMSTANCES. The Council-(Board) may grant special permission, on such terms as the Council-(Board) may deem appropriate, in cases of emergency or unusual circumstances, without discrimination to any person or utility, to erect, construct, install, maintain, use or operate poles and overhead wires and associated overhead structures, notwithstanding any other provisions of this ordinance. The grant of such special permission may include, but need not be limited to, the right to erect, construct, install, maintain, use or operate an electric distribution system consisting of metal poles supporting high voltage wires, switches, transformers and street lights, with all other facilities for the supplying and distribution of electric energy and service placed underground.

SECTION 6. EXCEPTION, MUNICIPAL EQUIPMENT. The provisions of this ordinance shall not apply to poles used exclusively for fire alarm boxes or any other municipal-(County) equipment installed under the supervision and to the satisfaction of the City Engineer-(County Engineer), or to poles and overhead wires and associated overhead structures used exclusively for street lighting furnished under contract with City-(County) or by any other duly constituted public agency authorized to provide such street lighting within City-(County).

SECTION 7. OTHER EXCEPTIONS, WIRES OF CONTINUOUS LEAD. RADIO ANTENNAE, PEDESTAL SERVICE TERMINALS, CERTAIN WIRES ATTACHED TO BUILDINGS. This ordinance shall not apply to the following types of facilities:

(a) Overhead wires (exclusive of supporting structures) crossing any portion of a District from which overhead wires have been prohibited, or connecting to buildings on the perimeter of such portion, when such wires originate in an area from which poles and overhead wires and associated overhead structures are not prohibited;

(b) Overhead wires attached to the exterior surface of a building by means of a bracket or other fixture and extending from one location on the building to another location on the same building or to an adjacent building without crossing any public street;

(c) Radio antennae, their associated equipment and supporting structures, used by a utility for furnishing communication service; or

(d) Service terminals, in pedestals, aboveground, used to distribute communication service in underground systems.

(e) Equipment appurtenant to underground facilities, such as surface mounted transformers, pedestal mounted terminal boxes and meter cabinets, and concealed ducts.

(f) Overhead wires and supporting structures of transmission lines rated at 50,000 volts and above.

SECTION 8. NOTICE TO PROPERTY OWNERS AND UTILITY COMPANIES. Within ten (10) days after passage of an ordinance pursuant to Section 3 hereof, the City Clerk-(County Clerk) shall notify all affected utilities and all persons owning real property within the area designated in said ordinance of the adoption thereof. Said City Clerk-(County Clerk) shall further notify such affected property owners of the necessity that, if they or any person occupying such property desire to continue to receive electric, communication, or other similar or associated service, they or such occupant shall provide all necessary facility changes on their premises so as to receive such service from the lines of the supplying utility or utilities at a new location, subject to applicable rules, regulations and tariffs of the respective utility or utilities on file with the Commission.

Notification by said City Clerk-(County Clerk) shall be made by mailing a copy of said ordinance, together with a copy of this ordinance, to the affected utilities and to affected property owners as such are shown on the last equalized assessment roll of the County of _____.

SECTION 9. RESPONSIBILITY OF UTILITY COMPANIES. If underground construction is necessary to provide utility service within the area affected by any ordinance adopted pursuant to Section 3 hereof, the supplying utility shall furnish that portion of the conduits, conductors and associated equipment required to be furnished by it under its applicable rules, regulations and tariffs on file with the Commission. Underground construction by the utility shall be accomplished in accordance with established construction standards and in accordance with the rules and regulations authorized by the Commission.

SECTION 10. RESPONSIBILITY OF PROPERTY OWNER; NOTICE. All underground construction and conduits, conductors and associated equipment necessary to receive utility service between the service terminals of the supplying utility and the service facilities in the building or structure being served shall be provided by the person owning, operating, leasing or renting said property, subject to applicable rules, regulations and tariffs of the respective utility or utilities on file with the Commission. If the above is not accomplished by any person within the time provided for in the ordinance adopted pursuant to Section 3 hereof, the City Engineer-(County Engineer) shall give notice in writing to the person in possession of such premises, and a notice in writing to the owner thereof, to provide the required underground facilities within ten (10) days after receipt of such notice.

SECTION 10.1. SERVICE OF NOTICE. Notice pursuant to Section 10 hereof may be given either by personal service or by mail. In case of service by mail, the notice must be deposited in the United States mail in a sealed envelope with postage prepaid, addressed to the person in possession of such premises at such premises, and the notice must be addressed to the owner thereof as such owner's name appears, and must be addressed to such owner's last known address as the same appears on the last equalized assessment roll of the County of _____, and when no address appears, to General Delivery, City of _____(or County area). If notice is given by mail, such notice shall be deemed to have been received by the person to whom it has been sent within forty-eight (48) hours after the mailing thereof. If notice is given by mail to either the owner or occupant of such premises, the City Engineer of the City-(County Engineer of the County) shall, within forty-eight (48) hours after the mailing thereof, cause a copy thereof, printed on a card not less than eight (8) inches by ten (10) inches in size, to be posted in a conspicuous place on said premises.

SECTION 10.2. CONTENTS OF NOTICE. The notice given pursuant to Section 10 hereof shall particularly specify what work is required to be done, and shall state that if said work is not completed within ten (10) days after receipt of such notice the City Engineer of City-(County Engineer of County) will provide such required underground facilities, in which case the cost and expense thereof will be assessed against the property benefited and become a lien upon such property.

SECTION 10.3. PERFORMANCE OF WORK BY CITY; ASSESSMENT. If upon the expiration of the ten (10) day period specified in Section 10.2 hereof, the required underground facilities have not been provided, the City Engineer-(County Engineer) shall forthwith proceed to do the work; provided, however, if such premises are unoccupied and no electric or communication services are being furnished thereto, the City Engineer-(County Engineer) may, in lieu of providing the required underground facilities, order the disconnection of all existing connections used for furnishing electric and communication services to such premises. Upon completion of the work by the City Engineer-(County Engineer), he shall file a written report with the Council setting forth the fact that the required underground facilities have been provided and the cost thereof, together with a legal description of the property against which such cost is to be assessed. The Council shall thereupon fix a time and place for hearing protests against the assessment of the cost of such work upon such premises, which said time shall be not less than ten (10) days thereafter.

SECTION 10.4. NOTICE OF ASSESSMENT. The City Engineer-(County Engineer) shall forthwith, upon the time for hearing such protests having been fixed, give notice in writing to the person in possession of such premises, and a notice in writing to the owner thereof, in the manner hereinabove provided for the giving of the notice to provide the required underground facilities, of the time and place that the Council will pass upon said report of the City Engineer-(County Engineer) and will hear protests against such assessment. Such notice shall also set forth the amount of the proposed assessment.

SECTION 10.5. HEARING AND CONFIRMATION OF ASSESSMENT. Upon the date and hour set for the hearing of protests, the Council-(Board) shall hear and consider the report and all protests, if there be any, and then proceed to affirm, modify or reject the assessment.

SECTION 10.6 ASSESSMENT AS LIEN. If any assessment is not paid within five (5) days after its confirmation by the Council-(Board), the amount of the assessment shall become a lien upon the property against which the assessment is made by the City Engineer-(County Engineer), and the City Engineer (County Engineer) is directed to turn over to the Assessor and Tax Collector for City-(County) a notice of lien on each of said properties on which the assessment has not been paid, and said Assessor and Tax Collector shall add the amount of said assessment to the next regular bill for taxes levied against the premises upon which said assessment was not paid. Said assessment shall be due and payable at the same time as said property taxes are due and payable, and if not paid when due and payable shall bear interest at the rate of six per cent (6%) per annum.

SECTION 11. RESPONSIBILITY OF CITY-(COUNTY). City-(County) shall remove at its own expense all City-owned(County-owned) equipment from all poles required to be removed hereunder in ample time to enable the owner or user of such poles to remove the same within the time specified in the ordinance adopted pursuant to Section 3.

SECTION 12. EXTENSION OF TIME. In the event that any act hereby required of any party herein referred to cannot be performed within the time herein provided on account of shortage of materials, war, restraint by public authorities, strikes, labor disturbances or any other circumstances beyond the control of the actor, then the time within which such act will be accomplished shall be extended for a period equivalent to the time of such limitations.

SECTION 13. PENALTY. It shall be unlawful for any person to violate any provision or to fail to comply with any of the requirements of this ordinance. Any person violating any provision of this ordinance or failing to comply with any of its requirements shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding Five Hundred Dollars ($500.00) or by imprisonment not exceeding six (6) months, or by both such fine and imprisonment. Each such person shall be deemed guilty of a separate offense for each day during any portion of which any violation of any of the provisions of this ordinance is committed, continued or permitted by such person, and shall be punishable therefor as provided for in this ordinance.

SECTION 14. CONSTITUTIONALITY. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this ordinance. The Council hereby declares that it would have passed the ordinance

and each section, subsection, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

SECTION 15. PUBLICATION. The City Clerk-(County Clerk) is hereby directed to cause this ordinance to be published by one insertion in the _____, a newspaper of general circulation printed, published and circulated in City-(County) and hereby designated for that purpose by the Council-(Board).

SECTION 16. EFFECTIVE DATE. This ordinance shall take effect and be in force thirty (30) days from and after its adoption.

This ordinance was introduced and read on the _____ day of _____, 1966, and passed and adopted on the _____ day of _____, 1966, by the following vote:

AYES: _____

NOES: _____

ABSENT: _____

_____
Mayor

ATTEST:

_____
City Clerk

SUGGESTED ORDINANCE NO. _____

ESTABLISHING REGULATIONS AND PROCEDURES FOR THE REMOVAL OF POLES, OVERHEAD WIRES AND ASSOCIATED OVERHEAD STRUCTURES AND FOR THE UNDERGROUND INSTALLATION OF WIRES AND FACILITIES FOR SUPPLYING ELECTRIC, COMMUNICATION OR SIMILAR OR ASSOCIATED SERVICE IN DESIGNATED DISTRICTS.

BE IT ORDAINED BY THE COUNCIL OF _____ AS FOLLOWS:

SECTION 1. DEFINITIONS. Whwnever in this ordinance the words or phrases hereinafter in this section defined are used, they shall have the respective meanings assigned to them in the following definitions:

(a) "City" shall mean the City of _____, a municipal corporation of the State of California

("County" shall mean the County of Solano)

(b) "Commission" shall mean the Public Utilities Commission of the State of California.

(c) "Council" shall mean the City Council of City.

("Board" shall mean the Board of Supervisors of County.)

(d) "Person" shall mean and include individuals, firms, corporations, partnerships, and their agents and employees.

(e) "Poles and overhead wires and associated overhead structures" shall mean poles, towers, supports, wires, conductors, guys, stubs, platforms, crossarms, braces, transformers, insulators, cutouts, switches, communication circuits, appliances, attachments and appurtenances located above-ground upon, along, across or over the public streets, alleys and ways of City (County) and used or useful in supplying electric, communication or similar or associated service.

(f) "Utility" shall include all persons or entities supplying electric, communication or similar or associated service by means of electrical materials or devices.

SECTION 2. PUBLIC HEARING BY COUNCIL (BOARD). The Council (Board) may from time to time call public hearings to ascertain whether the public necessity, health, safety or welfare requires the removal of poles and overhead wires and associated overhead structures from any public streets, alleys or ways within designated areas of City (County) and the underground installation of wires and facilities for supplying electric, communication, or similar or associated service. The City Clerk (County Clerk) shall notify all affected property owners and utilities by mail of the time and place of such hearings at least thirty (30) days prior to the date thereof. Each such hearing shall be open to the public and may be continued from time to time. At each such hearing all persons interested shall be given an opportunity to be heard. The decision of the Council (Board) shall be final and conclusive.

SECTION 3. ORDINANCE FOR REMOVAL OF OVERHEAD STRUCTURES AND UNDERGROUND INSTALLATION. If after any such public hearing the Council-(Board) finds that the public necessity, health, safety or welfare requires such removal and such underground installation, the Council-(Board) shall by ordinance order such removal and underground installation. The ordinance shall designate the public streets, alleys or ways, or portions thereof, from which such poles and overhead wires and associated overhead structures must be removed and such underground installation made, and shall fix the time within which such work must be done. A reasonable time shall be allowed for such removal and underground installation, having due regard for the availability of necessary labor, materials and equipment for such removal and for the installation of such underground facilities as may be occasioned thereby.

SECTION 4. UNLAWFUL ACTS. Whenever the Council-(Board) orders the removal of poles and overhead wires and associated overhead structures as provided in Section 3 hereof, it shall be unlawful for any person or utility to erect, construct, place, keep, maintain, continue, employ or operate any pole, overhead wire or associated overhead structure in any public street, alley or way in the designated area after the date when said overhead facilities are required to be removed, except as said overhead facilities may be required to furnish service to an owner or occupant of property prior to the performance by such owner or occupant or the City Engineer-(County Engineer) of the underground work necessary for such owner or occupant to continue to receive utility service as provided in Sections 10 and 10.3 hereof, and for such

reasonable time required to remove said facilities after said work has been performed, and except as otherwise provided in this ordinance.

SECTION 5. EXCEPTION, EMERGENCY OR UNUSUAL CIRCUMSTANCES. The Council-(Board) may grant special permission, on such terms as the Council may deem appropriate, in cases of emergency or unusual circumstances without discrimination to any person or utility, to erect, construct, install, maintain, use or operate poles and overhead wires and associated overhead structures, notwithstanding any other provisions of this ordinance. The grant of such special permission may include, but need not be limited to, the right to erect, construct, install, maintain, use or operate an electric distribution system consisting of metal poles supporting high voltage wires, switches, transformers and street lights, with all other facilities for the supplying and distribution of electric energy and service placed underground.

SECTION 6. EXCEPTION, MUNICIPAL EQUIPMENT. The provisions of this ordinance shall not apply to poles used exclusively for fire alarm boxes or any other municipal-(County) equipment installed under the supervision and to the satisfaction of the City Engineer-(County Engineer), or to poles and overhead wires and associated overhead structures used exclusively for street lighting furnished under contract with City-(County) or by any other duly constituted public agency authorized to provide such street lighting within City-(County).

SECTION 7. OTHER EXCEPTIONS, WIRES OF CONTINUOUS LEAD, RADIO ANTENNAE, PEDESTAL SERVICE TERMINALS, CERTAIN WIRES ATTACHED TO BUILDINGS. This ordinance shall not apply to the following types of facilities:

(a) Overhead wires (exclusive of supporting structures) crossing any portion of a District from which overhead wires have been prohibited, or connecting to buildings on the perimeter of such portion, when such wires originate in an area from which poles and overhead wires and associated overhead structures are not prohibited;

(b) Overhead wires attached to the exterior surface of a building by means of a bracket or other fixtures and extending from one location on the building to another location on the same building or to an adjacent building without crossing any public street;

(c) Radio antennae, their associated equipment and supporting structures, used by a utility for furnishing communication services;

(d) Service terminals, in pedestals, aboveground, used to distribute communication service in underground systems; or

(e) Equipment appurtenant to underground facilities, such as surface mounted transformers, pedestal mounted terminal boxes and meter cabinets, and concealed ducts.

(f) Overhead wires and supporting structures of transmission lines rated at 50,000 volts and above.

SECTION 8. NOTICE TO PROPERTY OWNERS AND UTILITY COMPANIES. Within ten (10) days after passage of an ordinance pursuant to Section 3 hereof, the City Clerk-(County Clerk) shall notify all affected utilities and all persons owning real property within the area designated in said ordinance of the adoption thereof. Said City Clerk-(County Clerk) shall further notify such affected property owners of the necessity that, if they or any person occupying such property desire to continue to receive electric, communication, or other similar or associated service, they or such occupant shall provide all necessary facility changes on their premises so as to receive such service from the lines of the supplying utility or utilities at a new location, subject to applicable rules, regulations and tariffs of the respective utility or utilities on file with the Commission.

Notification by said City Clerk-(County Clerk) shall be made by mailing a copy of said ordinance, together with a copy of this ordinance, to the affected utilities and to affected property owners as such are shown on the last equalized assessment roll of the County of Solano.

SECTION 9. RESPONSIBILITY OF UTILITY COMPANIES. If underground construction is necessary to provide utility service within the area affected by any ordinance adopted pursuant to Section 3 hereof, the supplying utility shall furnish that portion of the conduits, conductors and associated equipment required to be furnished by it under its applicable rules, regulations and tariffs on file with the Commission.

Underground construction by the utility shall be accomplished in accordance with established construction standards and in accordance with the rules and regulations authorized by the Commission.

SECTION 10. RESPONSIBILITY OF PROPERTY OWNER; NOTICE. All underground construction and conduits, conductors and associated equipment necessary to receive utility service between the service terminals of the supplying utility and the service facilities in the building or structure being served shall be provided by the person owning, operating, leasing or renting said property, subject to applicable rules, regulations and tariffs of the respective utility or utilities on file with the Commission. If the above is not accomplished by any person within the time provided for in the ordinance adopted pursuant to Section 3 hereof, the City Engineer-(County Engineer) shall give notice in writing to the person in possession of such premises, and a notice in writing to the owner thereof, to provide the required underground facilities within ten (10) days after receipt of such notice.

SECTION 10.1. SERVICE OF NOTICE. Notice pursuant to Section 10 hereof may be given either by personal service or by mail. In case of service by mail, the notice must be deposited in the United States mail in a sealed envelope with postage prepaid, addressed to the person in possession of such premises at such premises, and the notice must be addressed to the owner thereof as such owner's name appears, and must be addressed to such owner's last known address as the same appears on the last equalized assessment roll of the County of Solano, and when no address appears, to General Delivery, City of _____ (County area). If notice is given by mail, such notice shall be deemed to have been received by the per-

son to whom it has been sent within forty-eight (48) hours after the mailing thereof. If notice is given by mail to either the owner or occupant of such premises, the City Engineer of the City (County Engineer of the County) shall, within forty-eight (48) hours after the mailing thereof, cause a copy thereof, printed on a card not less than eight (8) inches by ten (10) inches in size, to be posted in a conspicuous place on said premises.

SECTION 10.2 CONTENTS OF NOTICE. The notice given pursuant to Section 10 hereof shall particularly specify what work is required to be done, and shall state that if said work is not completed within ten (10) days after receipt of such notice the City Engineer of the City (County Engineer of the County) will provide such required underground facilities, in which case the cost and expense thereof will be assessed against the property benefited and become a lien upon such property.

SECTION 10.3 PERFORMANCE OF WORK BY CITY (COUNTY); ASSESSMENT. If upon the expiration of the ten (10) day period specified in Section 10.2 hereof, the required underground facilities have not been provided, the City Engineer (County Engineer) shall forthwith proceed to do the work; provided, however, if such premises are unoccupied and no electric or communication services are being furnished thereto, the City Engineer (County Engineer) may, in lieu of providing the required underground facilities, order the disconnection of all existing connections used for furnishing electric and communication services to

such premises. Upon completion of the work by the City Engineer-(County Engineer), he shall file a written report with the Council setting forth the fact that the required underground facilities have been provided and the cost thereof, together with a legal description of the property against which such cost is to be assessed. The Council-(Board) shall thereupon fix a time and place for hearing protests against the assessment of the cost of such work upon such premises, which said time shall be not less than ten (10) days thereafter.

SECTION 10.4. NOTICE OF ASSESSMENT. The City Engineer-(County Engineer) shall forthwith, upon the time for hearing such protests having been fixed, give a notice in writing to the person in possession of such premises, and a notice in writing to the owner thereof, in the manner hereinabove provided for the giving of the notice to provide the required underground facilities, of the time and place that the Council-(Board) will pass upon said report of the City Engineer-(County Engineer) and will hear protests against such assessment. Such notice shall also set forth the amount of the proposed assessment.

SECTION 10.5. HEARING AND CONFIRMATION OF ASSESSMENT. Upon the date and hour set for the hearing of protests, the Council-(Board) shall hear and consider the report and all protests, if there be any, and then proceed to affirm, modify or reject the assessment.

SECTION 10.6. ASSESSMENT AS LIEN. If any assessment is not paid within five (5) days after its confirmation by the Council-(Board), the amount of the assessment shall become a lien upon the property against which the assessment is made by the City Engineer-(County Engineer), and the City Engineer-(County Engineer) is directed to turn over to the Assessor and Tax Collector for City-(County) a notice of lien on each of said properties on which the assessment has not been paid, and said Assessor and Tax Collector shall add the amount of said assessment to the next regular bill for taxes levied against the premises upon which said assessment was not paid. Said assessment shall be due and payable at the same time as said property taxes are due and payable, and if not paid when due and payable shall bear interest at the rate of six per cent (6%) per annum.

SECTION 11. RESPONSIBILITY OF CITY-(COUNTY). City-(County) shall remove at its own expense all City-owned (County-owned) equipment from all poles required to be removed hereunder in ample time to enable the owner or user of such poles to remove the same within the time specified in the ordinance adopted pursuant to Section 3.

SECTION 12. EXTENSION OF TIME. In the event that any act hereby required of any party herein referred to cannot be performed within the time herein provided on account of shortage of materials, war, restraint by public authorities, strikes, labor disturbances or any other circumstances beyond the control of the actor, then the time within which such act will be accomplished shall be extended for a period equivalent to the time of such limitations.

SECTION 13. PENALTY. It shall be unlawful for any person to violate any provision or to fail to comply with any of the requirements of this ordinance. Any person violating any provision of this ordinance or failing to comply with any of its requirements shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not exceeding Five Hundred Dollars ($500.00) or by imprisonment not exceeding six (6) months, or by both such fine and imprisonment. Each such person shall be deemed guilty of a separate offense for each day during any portion of which any violation of any of the provisions of this ordinance is committed, continued or permitted by such person, and shall be punishable therefor as provided for in this ordinance.

SECTION 14. CONSTITUTIONALITY. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this ordinance. The Council-(Board) hereby declares that it would have passed the ordinance and each section, subsection, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid.

SECTION 15. PUBLICATION. The City Clerk-(County Clerk) is hereby directed to cause this ordinance to be published by one insertion in the _____, a newspaper of general circulation printed, published and circulated in City-(County) and hereby designated for that purpose by the Council-(Board).

SECTION 16. EFFECTIVE DATE. This ordinance shall take effect and be in force thirty (30) days from and after its adoption.

This ordinance was introduced and read on the _____ day of _____, 19__, and passed and adopted on the _____ day of _____, 19__, by the following vote:

AYES: _____

NOES: _____

ABSENT: _____

_____
Mayor of the City of

(Chairman of the Board, Solano County)

ATTEST:

_____
City Clerk

(County Clerk)

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